

1 UNITED STATES DISTRICT COURT
2 FOR THE DISTRICT OF TEXAS
3 HOUSTON DIVISION
4 Civil Action No. H-91-0158

CERTIFIED COPY

5 MRS. SAMUEL E. ALLGOOD, Individually and
6 as Independent Executrix of the Estate of
7 SAMUEL E. ALLGOOD, MARCUS ALLGOOD, and
8 MALCOLM ALLGOOD,

9 Plaintiffs,

10 vs.

11 R. J. REYNOLDS TOBACCO COMPANY,
12 THE AMERICAN TOBACCO COMPANY,
13 THE TOBACCO INSTITUTE, INC., and
14 THE COUNCIL FOR TOBACCO RESEARCH-U.S.A., INC.,

15 Defendants.

FLA

16 DEPOSITION OF DR. WILLIAM SAMUEL SIMMONS,
17 a witness called on behalf of the plaintiff, before
18 Pamela T. Rayburn, Notary Public, in and for the
19 State of North Carolina, at the Highpoint Room,
20 Airport Marriott, Greensboro, North Carolina on
21 Thursday, March 31, 1994, commencing at 4:15 p.m.

22 Reported in Stenotype by
23 Pamela T. Rayburn, RPR
24 Transcript produced by computer-aided transcription
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FLA

S T I P U L A T I O N S

Before testimony was taken, it was stipulated by and between counsel representing the respective parties as follows:

1. That any defect in the notice of the taking of this deposition, either as to time or place or otherwise as required by statute, is expressly waived, and this deposition shall have the same effect as if formal notice in all respects as required by statute had been given and served upon the counsel in the manner prescribed by law.

2. That this deposition shall be taken for the purpose of discovery or for use as evidence in the above-entitled action, or for both purposes.

3. That this deposition is deemed opened and all formalities and requirements with respect to the opening of this deposition are hereby waived, and this deposition shall have the same effect as if all formalities in respect to the opening of the same have been complied with in detail.

4. That the undersigned, Pamela T. Rayburn, Registered Professional Reporter and Notary Public, is duly qualified and constituted to take this deposition.

5. Objections to questions, except as to the form thereof, and motion to strike answers need not be made during the taking of this deposition, but may be reserved until any pretrial hearing held before any judge of any court of competent jurisdiction for the purpose of ruling thereon, or at any other hearing or trial of said case at which said deposition might be used, except that an objection as to the form of a question must be made at the time such a question is asked or objection is waived as to the form of the question. All objections made by one counsel are deemed made by all counsel.

6. That the North Carolina Rules of Civil Procedure shall control concerning the use of the deposition at court.

7. That the deposition transcript is to be read to or by the said witness, who, after making such corrections therein as are necessary, will subscribe the same before a notary public.

1 DR. WILLIAM SAMUEL SIMMONS,
2 having been duly sworn, was examined and did
3 testify as follows:

4 EXAMINATION

5 BY MR. HOLFORD:

6 Q. Sir, would you state your full name.

7 A. William Samuel Simmons.

8 Q. I'm Doug Holford. I represent the plaintiffs in
9 this action against your company and others, being
10 Bonnie Allgood, Marcus Allgood, and Malcolm Allgood,
11 the wife and sons of the deceased, Samuel Edward
12 Allgood. Are you familiar with that name of the
13 case?

14 A. I've heard the man's name, yes, sir.

15 Q. What is your -- I'm sorry. We have never met or
16 talked before now; is that right?

17 A. That is correct, yes, sir.

18 Q. What is your residence address?

19 A. [DELETED]

20
21 Q. And what's your telephone number there?

22 A. Area code [DELETED]

23 Q. And your office address as your delivery
24 address?

25 A. It's just to me, Bowman Gray Technical Center,

1 R. J. Reynolds Tobacco Company. The zip is 27102.

2 Q. And what is your own telephone number there?

3 A. Area code 910-741-5545.

4 Q. Are you giving this deposition on company time?

5 A. Yes, sir.

6 Q. Have you given depositions before?

7 A. I have.

8 Q. Did you read and sign that deposition before?

9 A. I did.

10 Q. Do you wish to read and sign this deposition?

11 MR. DAVID: Yes, we do.

12 BY MR. HOLFORD:

13 Q. Where were you raised, sir?

14 A. I was born in Monroeville, Alabama. I was
15 reared after the age of 13, 14, in Opelika, Alabama.
16 That's O-P-E-L-I-K-A.

17 Q. What is your position now?

18 A. My position with Reynolds?

19 Q. Yes.

20 A. I'm a Principal Scientist.

21 Q. Are you Director of Smoking and Health?

22 A. I held that title until I was promoted to
23 Principal Scientist.

24 Q. What are you working on now?

25 A. I have several responsibilities. I continue to

1 serve in the function that I had as Director of
2 Smoking and Health. Those duties I still have, which
3 is surveillance of the scientific literature with
4 regard to smoking associated diseases. And I have, I
5 work in a scientific way in which I am involved
6 peripherally in product development.

7 Q. Do you work on specific brands, or just across
8 the product of the company?

9 A. Not on specific brands. It would be on new
10 technology.

11 Q. Do you understand that your answers given under
12 oath here today have the same effect as though you
13 were at the trial of this case on the witness stand,
14 having been sworn, and giving answers there?

15 A. Yes, sir, I do.

16 Q. If I ask any question and you for any reason
17 don't understand it will you tell me that?

18 A. Certainly.

19 Q. If after you have read and signed the transcript
20 of this deposition, and I take it, open it, and find
21 a page, a question by me followed by simply a answer
22 by you can I fairly understand that in giving that
23 answer you understood that question?

24 A. Yes, sir, that's --

25 Q. Assuming this case goes to trial, and the

1 plaintiffs complete putting on their initial case at
2 that trial, and defense is proceeding putting on its
3 witnesses, are you going to testify there live?

4 MR. DAVID: Object to the question. I
5 think that the only way Dr. Simmons could know
6 whether he is going to testify there is through
7 communications with counsel. Those communications
8 would be protected. I instruct him not to answer.

9 BY MR. HOLFORD:

10 Q. Do you have any understanding in that regard?

11 MR. DAVID: You mean excluding anything he
12 might have discussed with counsel in that regard?

13 BY MR. HOLFORD:

14 Q. I do not want you to state any of your
15 communications with counsel.

16 MR. DAVID: Okay. If you can answer the
17 question without indicating that you have discussed
18 anything with counsel in that regard, go ahead, Sam.

19 BY MR. HOLFORD:

20 A. I don't know whether I'll be testifying or not.

21 Q. If asked are you going to?

22 A. I'm sorry. I didn't understand that. You mean
23 if counsel asks me to testify?

24 Q. Right.

25 A. If counsel asks me to testify I will.

1 Q. By the way, are you taking any prescription
2 drugs at this time?

3 A. I take vitamins. Do you consider that a --

4 Q. I don't know.

5 A. I don't consider that a drug. I do take
6 vitamins. And I have recurrent tennis elbow. And I
7 take some Nuprin for tennis elbow.

8 Q. I show you what's been marked Simmons Exhibit 1.
9 Do you recognize that?

10 A. I don't remember actually seeing this. I don't
11 remember seeing this particular --

12 Q. Hold on. Okay. But will you look at the second
13 page where it says Subpoena Duces Tecum.

14 A. I see it.

15 Q. And the items that are numbered under that.

16 A. I see those.

17 Q. Are you familiar with that list of items? Has
18 that been discussed with you?

19 A. It has, yes.

20 Q. Okay. Did you have any documents you've brought
21 in response to those items.

22 MR. DAVID: Let the record reflect that
23 counsel for Reynolds has handed counsel for plaintiff
24 some documents, and has additionally provided a
25 response of defendant, R. J. Reynolds Tobacco Company

1 and William S. Simmons, the plaintiff's Notice of
2 Deposition of William S. Simmons and Subpoena Duces
3 Tecum.

4 BY MR. HOLFORD:

5 Q. Okay. One of the things you handed me was a --
6 do you call that a CV or curriculum vitae?

7 A. A summary.

8 Q. A summary? Okay.

9 MR. HOLFORD: But let's mark that as
10 Exhibit 2.

11 BY MR. HOLFORD:

12 Q. Is that in response to item 2 of the Duces
13 Tecum?

14 A. That's correct.

15 Q. Okay. Let's mark that as Exhibit 2. Is Exhibit
16 2 fairly recently prepared?

17 A. Yes, sir, it is.

18 Q. Okay. Is it complete?

19 A. Yes, sir, it is.

20 Q. Is it all true?

21 A. It is.

22 Q. So the last work that you've had published is
23 dated 1980?

24 A. I didn't look at -- I haven't looked at it
25 recently. Let me see. Looks like it. That's

1 correct.

2 Q. I'm sorry. My fault.

3 A. I'm sorry.

4 Q. Now, you also handed me -- what are these two?
5 The thick one is what?

6 A. It would be -- just wait a minute. Oh, yeah.
7 If you look at number 6, it is a list of the
8 publications. It's not exhaustive. A list of the
9 publications out of scientific literature that I
10 would have reviewed or studied or incorporated into
11 my own files regarding laryngeal cancer.

12 Q. Okay. So it is, it is responsive to item number
13 6 of the Duces Tecum?

14 A. Yes, sir, I believe that's correct.

15 Q. All right. Okay. The item, this thick item you
16 handed me is, has bates numbers 50837 4416 through
17 50837 4476; is that correct?

18 A. Let me see. I haven't --

19 Q. Actually I think there's one more page. Yes,
20 there is. Okay. Would you state them, sir?

21 A. The numbers go from 50837 4416 to 50837 4477.

22 Q. All right.

23 MR. HOLFORD: Mr. David, there -- this is
24 kind of thick, so I could just add it to this stack
25 and take it to Houston and --

1 MR. DAVID: Yes, please do.

2 MR. HOLFORD: I'll return it to you after I
3 copy it. All right?

4 MR. DAVID: Okay.

5 BY MR. HOLFORD:

6 Q. And then there's two pages that you handed me.
7 What are they responsive to?

8 A. These are, one is a letter to the editor of the
9 Journal Circulation regarding a paper that they
10 published, that was published in circulation, I
11 believe by Dr. Stanton Glantz. So it's a letter to
12 the Editor of Circulation.

13 Q. What's the bates number of that page you just
14 described?

15 A. I'm sorry. 50837 4355. And the other is a
16 letter to the editor of, I believe it was a newspaper
17 in Charlotte. And let's see what it's, it's
18 concerning. The article by Stanton Glantz. And the
19 numbers on this page are 50837 4354.

20 Q. Okay. And according to -- that is which item of
21 the Duces Tecum are those two pages responsive to?

22 A. Any and all works. Number 4, I'm sorry.

23 Q. Okay.

24 MR. HOLFORD: Let's mark those as Exhibit
25 3, two pages.

1 Q. So do the two documents 50837 4416 through 50837
2 4477 and the two pages marked Exhibit 3 and your
3 curriculum vitae, are those all of the documents you
4 have that are responsive to the items of the Duces
5 Tecum?

6 A. Yes, sir, that's correct.

7 MR. DAVID: Well, again I just want to
8 state for the record, as we had in the prior
9 depositions, that these are all the documents that we
10 could gather in the short amount of time that we had
11 in order to provide at least some response. We're
12 not saying that these are all the items that exist
13 within the confines of Reynolds or even the document
14 depository.

15 BY MR. HOLFORD:

16 Q. Dr. Simmons, as you sit there now do you believe
17 that you have seen materials that are sufficient to
18 support the opinions to which you intend to testify
19 in this case?

20 A. I do.

21 MR. GODLEWSKI: Seen here today or seen
22 ever?

23 MR. HOLFORD: I didn't qualify it. I
24 believe it means seen ever. That's my understanding.

25 BY MR. HOLFORD:

1 Q. Now, do any of the works identified in your CV,
2 Exhibit 2, involve tobacco use and disease?

3 A. Let me just check this. I don't -- no, they do
4 not.

5 Q. Okay. Do any of the works described in your CV
6 involve nicotine addiction or dependence?

7 A. No, sir.

8 Q. Do you smoke?

9 A. I do.

10 Q. How much do you smoke?

11 A. It's variable. Anywhere from one pack to two
12 packs a day. But it's variable.

13 Q. Just depending on the conditions that day?

14 A. Well, for instance, this past weekend I went to
15 Pinehurst to play in a tennis tournament, and I
16 probably smoked less than half a pack a day while I
17 was down there. I mean, it's variable.

18 Q. Do you find that you smoke less when you are
19 doing that exercise?

20 A. I can't say that that is the case. I'm not sure
21 exactly what does influence the rate at which I
22 smoke. It could be when I'm busy or I'm
23 concentrating I may smoke more. But I don't know.

24 Q. Have you ever smoked during the period in which
25 you were engaging in heavy exercise?

1 A. I'm not sure what you mean by heavy exercise. I
2 have been an exercise person for sometime. I mean,
3 it goes back many years.

4 Q. Well, it may not be heavy to you then. But
5 where a substantial part of your day is taken up in
6 exercise, as in a tennis tournament competition --

7 MR. ALLEN: And the question is?

8 BY MR. HOLFORD:

9 Q. Do you smoke -- is the amount of your smoking
10 influenced by your activities that day?

11 MR. ALLEN: Asked and answered.

12 MR. HOLFORD: I'll change it.

13 BY MR. HOLFORD:

14 Q. Have you ever encountered a shortness of breath
15 because you were smoking during the time in which you
16 were engaging in exercise all day?

17 A. Not that I noticed.

18 Q. Okay. Now, how long have you been smoking?

19 A. My smoking has broken up into two periods. I
20 was a smoker until I was 30 -- from say 22 years old
21 until I was about 32 years old. And I stopped for a
22 period of, that is smoking cigarettes, for a period
23 of about 17, 18 years, and then I started again
24 smoking. And so, and I've been smoking since 1985.
25 So what's that? Some nine years.

1 Q. Since you resumed, in other words.

2 A. Right. Yes.

3 Q. I don't think -- I recall now -- I don't think
4 your summary or CV shows dates of -- pertaining to
5 you. What is your date of birth?

6 A. March 4, 1936.

7 Q. So you started smoking at about 1958?

8 A. Actually, actually I started smoking when I was
9 about 20 years old. So should have been around '56.

10 Q. About '56. All right. Now, during the 17 or so
11 years you mentioned that you did not smoke cigarettes
12 did you use any tobacco?

13 A. My wife and I have a disagreement about this.
14 I've kept pipes. I've always had pipes around the
15 house. And I may have smoked a pipe occasionally.
16 But it certainly was very occasionally.

17 Q. No chewing or snuff or --

18 A. No, I've never used oral tobacco.

19 Q. So in a sense you stopped using -- you stopped
20 smoking?

21 A. Cigarettes.

22 Q. Cigarettes, yeah. Well, did your pipe smoking
23 in any way replace your smoking cigarettes?

24 A. I smoked a pipe very little. My wife claims I
25 smoked it some. But I don't recall that. I know I

1 kept the pipes over the years. But I just don't
2 recall how much. It certainly was not much.

3 Q. It wasn't daily then?

4 A. No, certainly not.

5 Q. Okay. Now, why did you stop using cigarettes?

6 A. I was in graduate school at the time. And I was
7 married, had three children, young children. I was
8 on a stipend of \$250 a month. And frankly, even at
9 the prices back then it was very expensive, so I
10 stopped.

11 Q. And you say at that time you were in graduate
12 school.

13 Have you testified under oath before? You
14 mentioned deposition. But let's take trial. Have
15 you testified at trial before?

16 A. Yes, sir, I have.

17 Q. How many times?

18 A. Once.

19 Q. Was that in the Keuper case?

20 A. It was.

21 Q. That's three out of three. In that trial, Dr.
22 Simmons, did you state substantially the opinions
23 that you would expect to state in this case?

24 A. Yes.

25 MR. DAVID: I just object to the form of

1 the question.

2 BY MR. HOLFORD:

3 Q. And how many times have you given deposition?

4 A. In the Keuper case I gave two depositions.

5 Q. Was the second one a continuation of the first?

6 A. No. It was -- how do I answer that?

7 MR. HOLFORD: How did he end up giving two
8 depositions in the Keuper case?

9 MR. DAVID: Ask Mr. Keuper. Mr. Keuper
10 noticed, noticed each of the depositions.

11 MR. HOLFORD: All right.

12 MR. DAVID: I want to straighten out the
13 record. Keuper case was not a laryngeal cancer case.

14 MR. HOLFORD: No. It was lung cancer.

15 MR. DAVID: Just so that in connection with
16 is he going to express all the same opinions --

17 MR. HOLFORD: This is larynx and that's
18 adenocarcinoma. Right.

19 BY MR. HOLFORD:

20 Q. Your testimony regarding Mr. Keuper's lung
21 cancer is the same general gist as your testimony
22 will be regarding Mr. Allgood's laryngeal cancer.

23 MR. DAVID: Object to form.

24 BY MR. HOLFORD:

25 A. I don't know how to answer that question.

1 MR. GODLEWSKI: Areas of expertise.

2 BY MR. HOLFORD:

3 Q. Let me put it this way. Does the fact that
4 Mr. Keuper had a lung cancer and that Mr. Allgood had
5 a laryngeal cancer, except for your talking about the
6 two different types of cancer, does that, do these
7 facts change what your opinions will be in the case?

8 MR. DAVID: I'm going to object to the form
9 of the question, Doug. I mean, we say in the
10 declaration and what we've provided you what his
11 opinions are going to be in this case. I think we're
12 just going to confuse the record more and more if we
13 try to compare Keuper with this and what he testified
14 in Keuper and what he's going to testify in here. I
15 think it's very confusing.

16 MR. HOLFORD: Well, I've already -- I'm --
17 I don't have before me what he testified to in the
18 Keuper case, okay. Well, actually I was just
19 following up your suggestion, Mr. David. I'm
20 satisfied with his earlier answer. Okay.

21 BY MR. HOLFORD:

22 Q. Now, I've read your summary, Exhibit 2, Dr.
23 Simmons. But I have some additional work to ask you
24 about. Were you interviewed by John Stossel on
25 November 22, 1991? Start over. Were you interviewed

1 by Mr. John Stossel for the November 22, 1991
2 broadcast of the 20/20 show with Hugh Downs and
3 Barbara Walters?

4 A. I don't recall the exact dates, but I was
5 interviewed by Mr. John Stossel for a 20/20 program.
6 The dates I don't recall.

7 Q. Was it sometime close to November of '91?

8 A. To the best of my recollection, yes, sir.

9 Q. And were you interviewed by Sam Donaldson for
10 the February 23, 1993 Prime Time T.V. show?

11 A. Yes, sir, I was. Mr. Holford.

12 Q. Yes, sir.

13 A. There's something. I don't recall very well on
14 the date of the interview with John Stossel. I think
15 maybe we need to go back and check and see what that
16 date of that interview was. The program clearly
17 aired later, after the interview. But the November
18 number, I just want to make clear to you I'm a little
19 confused to you about that number. That doesn't ring
20 a right bell or something.

21 Q. Yes, sir. I have no idea how far ahead of the
22 telecast that Mr. Stossel might have interviewed you.
23 The only date I have is the date of the telecast,
24 which was November 22, 1991.

25 A. Okay. That's fine.

1 Q. Okay. Do you recall seeing either of these
2 telecasts when they were telecast?

3 A. No, I don't.

4 Q. Okay. Now, in the 20/20 piece, the interview
5 with John Stossel, did you express the opinion that
6 it has not been proven that smoking is a causative
7 factor as to any human disease, but that it is a risk
8 factor for several human diseases?

9 A. Yes, sir, I did.

10 Q. And you, you opined that way because you don't
11 believe epidemiological studies, even together with
12 animal studies and in vitro studies are ever
13 sufficient to prove causation as to human disease as
14 to cancer; is that right?

15 MR. ALLEN: I need to object to the
16 compound nature of the question.

17 BY MR. HOLFORD:

18 A. I think the question -- I don't understand the
19 question. I think you can break it into --

20 Q. All right. All right. Let me put it this way.
21 Even if you consider, and let's assume you know all
22 of the epidemiological studies, and animal studies,
23 and in vitro studies that have been done to show a
24 causative relation between smoking and various human
25 diseases, you do not agree that that causative

1 relationship has been shown; isn't that right?

2 MR. ALLEN: Let me object to the question
3 because of the compound nature of the question.
4 Furthermore, it assumes facts not in evidence.

5 MR. DAVID: It is an improper hypothetical.

6 BY MR. HOLFORD:

7 A. The question is -- I can't answer the question
8 the way you pose it because you've got some things in
9 there that are simply -- you've made some statements
10 that, to me, are not true in the question.

11 Q. Go ahead.

12 A. I don't know where to, where to go with this. I
13 mean --

14 MR. ALLEN: Then I object to the question
15 because it's compound and calls for conjecture and
16 speculation and assumes facts not in evidence, and
17 therefore, it's an improper question.

18 BY MR. HOLFORD:

19 Q. Dr. Simmons, if you want me to rephrase the
20 question I will. Okay. But if you just need to
21 think out your answer then --

22 A. No, I can't. I don't know how to answer it as
23 it's stated. It's stated kind of disjointed or
24 something. And I don't know how to deal with it as
25 it's stated.

1 Q. Okay. Let me try to change tack on it. Do you
2 believe that epidemiological studies, together with
3 animal studies, together with in vitro studies can
4 ever show that cigarette smoke is a causative factor
5 of diseases in humans?

6 MR. ALLEN: Let me just object to the
7 question to the extent -- are you asking can it ever
8 show in the future?

9 MR. HOLFORD: Yes.

10 BY MR. HOLFORD:

11 Q. Now, in the future, can those types of proof
12 ever prove it to you?

13 MR. ALLEN: Then I object to the question
14 to the extent it calls for conjecture and
15 speculation.

16 MR. DAVID: Join. By the way, so the
17 record's clear, we've had a stipulation in prior
18 deposition one defendant's objection --

19 MR. HOLFORD: Is sufficient for all.

20 MR. DAVID: Is sufficient for all. I want
21 to show on the record here and in the prior two
22 depositions as well.

23 BY MR. HOLFORD:

24 Q. Isn't that true, Dr. Simmons, those types of
25 proof just are never going to be sufficient to prove

1 the causative relation to you?

2 MR. DAVID: You can answer the question if
3 you understand it, Dr. Simmons. Or you can answer
4 the question by saying what would be sufficient.

5 BY MR. HOLFORD:

6 A. I'm going to try to give an answer that will
7 clarify. I mean, the question has me confused. All
8 right.

9 Q. You can explain an answer, Dr. Simmons.

10 A. All right.

11 Q. You don't have to say yes or no.

12 A. Let me try it this way.

13 Q. All right.

14 A. In the absence, in the absence of a mechanism by
15 which a xenobiotic initiates a lesion,
16 self-propagating lesion, neoplasia, in the absence of
17 that mechanism at the molecular level, the scientific
18 community has begun to use a phenomenological
19 definition of causation, phenomenological. In other
20 words, where data phenomena converge then this
21 phenomenological approach is used to classify
22 something as a carcinogen, an agent or factors as
23 carcinogenic. Now, obviously, for a number of
24 chemical agents such information exists and have been
25 classified as carcinogens. Right. Now, so I will

1 say that the correct combination of evidence on a
2 case by case basis may lead one to the conclusion
3 that an agent or factor is carcinogenic.

4 Q. All right. Now in your usage, Dr. Simmons, does
5 carcinogenic mean cancer causing?

6 A. Means cancer causing.

7 Q. And what agents in your opinion have been shown
8 to be human carcinogens?

9 MR. ALLEN: Let me object to the question
10 to the extent that it's overly broad, and also to the
11 extent that it's irrelevant to many of the issues in
12 this case, and is therefore, immaterial.

13 BY MR. HOLFORD:

14 Q. I say, if any. I'm not sure you meant human
15 carcinogens when you said carcinogens.

16 A. I did. I used, or perhaps I -- I'm not sure how
17 the answer went now. Combinations of epidemiology,
18 toxicology in animals, and to a certain extent in
19 vitro tests, combinations of evidence have been used
20 to classify agents or factors as carcinogenic in the
21 absence of a mechanism, carcinogenic in humans in the
22 absence of a mechanism.

23 Q. All right. And what, in your opinion what
24 factors or agents have been shown to be human
25 carcinogens by that method you described?

1 MR. ALLEN: Same objection.

2 MR. DAVID: Do you understand the question?

3 BY MR. HOLFORD:

4 A. As I understand it, you're asking me what do I
5 believe what agents would be human carcinogens that I
6 know of based on that a accumulation of evidence. Is
7 that --

8 Q. I thought you said that certain agents or
9 factors had been shown to be human carcinogens.

10 MR. DAVID: No. That's not what he said.
11 He said they had been classified as such. Not shown
12 to be, but classified as such. I think when you say
13 shown to be you implied that he agrees with that.
14 Classified as such by some other group, by some
15 agency, doesn't have -- carry that implication. And
16 I want that to be clear on the record.

17 MR. HOLFORD: What you want, Mr. David, is
18 for your client to remain free and clear in this and
19 any other case. I understand that. And I think that
20 your, I think that your --

21 MR. DAVID: What does that mean?

22 MR. HOLFORD: I think that your speeches --
23 once again, I'm going to put on the record as early
24 as I can that your speeches are not welcome on this
25 record and that you are there to object and only to

1 object. And I'll rely on what Dr. Simmons' answer
2 was before.

3 MR. DAVID: Well, he, well you can rely on
4 whatever you want to rely on. And my objection is on
5 the record, Doug. And I'm going to state my
6 objections, as I think I should do. And my
7 objections are proper. And I think that you are
8 treating this witness unfairly and you are
9 misinterpreting on purpose his testimony.

10 MR. HOLFORD: I don't have time -- it's
11 four minutes to 5:00. And several of us plane leaves
12 at 7:15.

13 MR. DAVID: That's not my problem.

14 MR. HOLFORD: So I don't have time to go
15 back and read the record, but I rely on my memory of
16 it.

17 MR. DAVID: That's not my problem.

18 BY MR. HOLFORD:

19 Q. What I'm asking, Dr. Simmons, is what agents or
20 factors did you have in mind when you said what you
21 said about certain ones and carcinogenicity in
22 humans?

23 MR. DAVID: Totally incomprehensible
24 question. I object.

25 Go ahead and answer if you understand it.

1 BY MR. HOLFORD:

2 A. Going back to your original statement about if
3 you ask a question followed by an answer it's
4 presumed that I understand the question. I'm going
5 to try to answer the question as I understand the
6 question.

7 Q. Um-hum.

8 A. An example of a chemical agent that has been
9 classified as a human carcinogen based on convergence
10 of phenomenological evidence would be something like
11 bischloramethal ether, which was used for many years
12 in the plastics industry. Occupational epidemiology
13 showed that it was a risk factor for lung cancer in
14 occupational exposed workers. Subsequent experiments
15 in laboratory animals by the route of inhalation
16 showed that an excess of cancer, lung cancer, was in
17 fact present in animals exposed to bischloramethal
18 ether as opposed to animals that were not. This and
19 other evidence, peripheral evidence, as you said in
20 vitro evidence, led to the classification of that
21 chemical as a human carcinogen, lung carcinogen.

22 Q. Is coal tar, has it been shown by these
23 convergent technologies that you described to be a
24 human carcinogen?

25 MR. DAVID: I'm going to object to the form

1 of the question in the sense that it uses the word
2 "has it been shown". I wouldn't object if you if you
3 said, "has it been classified." When you say, "has
4 it been shown" it takes the implication whether or
5 not it has been shown Dr. Simmons agrees. And that
6 is clearly outside the scope of Dr. Simmons'
7 testimony or expected testimony in this case. Can
8 you change your question to "classified" as opposed
9 to "shown"?

10 BY MR. HOLFORD:

11 Q. You have an answer, Dr. Simmons?

12 A. I don't recall a classification on coal tar.
13 And I would like to say that when you, when you refer
14 to it as a carcinogen, by what route of exposure, by
15 what dose, and so forth, these are all important
16 considerations.

17 Q. I understand that.

18 A. And I don't know the epidemiology on -- I don't
19 recall the epidemiology on coal tar. Coal tar is, in
20 skin painting studies in animals has been shown to be
21 carcinogenic. I don't know the epidemiology on it.
22 Don't recall the epidemiology on it.

23 Q. Okay. Now, have any of the constituents of
24 tobacco smoke been shown by these divergent
25 technologies, epidemiology, animal studies, and in

1 vitro studies, to be human carcinogens?

2 MR. DAVID: In the quantities contained in
3 tobacco smoke?

4 BY MR. HOLFORD:

5 Q. In the quantities contained in, right, smoking
6 cigarettes.

7 A. Not in the quantities found in cigarette smoke.
8 Not in the dosage found in cigarette smoke. There
9 are chemicals identified in cigarette smoke for which
10 a body of evidence, as I alluded to earlier, exists
11 that at the right dose level, or high enough dose
12 levels would be classified as human carcinogens.

13 Q. Can you name those?

14 A. I don't have a list in front of me. And I
15 certainly didn't memorize it. But there have been --
16 one that comes to mind is beta-naphthylamine.

17 COURT REPORTER: Excuse me?

18 THE WITNESS: Beta, B-E-T-A, dash,
19 naphthyl, N-A-P-H-T-H-Y-L-A-M-I-N-E.

20 BY MR. HOLFORD:

21 Q. Are there about 40 such substances in tobacco
22 smoke that have been so identified?

23 MR. DAVID: Well, I'm going to object to
24 the form of the question as because it's --

25 MR. HOLFORD: I'll rephrase it.

1 BY MR. HOLFORD:

2 Q. Have there been about 40 substances identified
3 in tobacco smoke that have been identified at the
4 doses that you have mentioned, or at analogous doses,
5 to be human carcinogens?

6 MR. DAVID: Object to the form of the
7 question. You can answer if you can.

8 BY MR. HOLFORD:

9 A. Maybe I better clarify this. The compounds that
10 have been classified as carcinogens that are in
11 tobacco smoke appear in minuscule concentrations,
12 microgram concentrations or less, per cigarette.
13 Some as low as in the nanogram range. Now, these are
14 not the concentrations that are used in animal
15 studies. When these compounds are tested in animal
16 studies they're tested at much, much higher levels.

17 Q. Well, I believe you've already said that you
18 don't believe that cigarette smoke in the amounts
19 presented in a person smoking cigarettes are there
20 insufficient doses to be human carcinogens. Isn't
21 that what you said?

22 A. I'm sorry. Would you repeat that question?

23 Q. Yes, sir. I said, when I asked you were there
24 any substances in cigarette smoke that had been
25 classified as human carcinogens your response was not

1 smoke, but neat.

2 Q. You mean isolated for testing?

3 A. Yes.

4 Q. Now, Dr. Simmons, you're saying there's some
5 other chemicals in cigarette smoke that in the same
6 way beta-naphthylamine has been shown to have
7 carcinogenic effect in humans others have also,
8 although you say not at the dosages experienced in
9 smoking cigarettes, right?

10 A. What, what I'm trying to get across is that when
11 these chemicals are tested in animals they are tested
12 at extraordinarily high levels, much higher than the
13 levels experienced by humans that are being exposed
14 to these compounds.

15 Q. In smoking cigarettes, right?

16 A. And in many, many cases higher than they would
17 experience in any other experience, in any other
18 setting, in any other environment. And that has been
19 a source of controversy over animal testing in recent
20 years, a real --

21 Q. It also leads you -- I mean, your belief in that
22 also leads you to conclude that you have to get to
23 doses higher than what a smoker experiences in
24 smoking cigarettes for these substances in the
25 cigarette smoke to be carcinogenic.

1 MR. DAVID: If at all.

2 BY MR. HOLFORD:

3 Q. In humans, right?

4 MR. DAVID: Object to the form of the
5 question. It's incomplete.

6 BY MR. HOLFORD:

7 Q. Isn't that right?

8 A. I don't understand the question. I'm sorry,
9 Mr. Holford.

10 Q. Well, do you remember when I -- at one point you
11 said that you didn't have the total list in mind, but
12 that beta-naphthylamine was an example?

13 A. Yes.

14 Q. I was going to try to figure out what some of
15 those other chemicals that are constituents of
16 tobacco smoke are. Do you remember any others? I
17 think that in the Surgeon General's report, there's a
18 list I might put to you. But I'll have to find it.

19 MR. DAVID: Well, first of all, just so the
20 record is clear, I believe that the testimony has
21 been that there are none within the dosages or
22 quantities that are found in cigarettes, period.

23 MR. HOLFORD: But that isn't what I asked
24 him.

25 MR. DAVID: That's what the record shows.

1 And you're confusing the record and you're trying to
2 manipulate the record and mislead this witness by the
3 kind of question you just asked.

4 MR. HOLFORD: You're wrong, Mr. David.

5 MR. DAVID: Well, I'm not wrong.

6 MR. HOLFORD: The record will speak for
7 itself. And I'm not going to reply to you.

8 MR. DAVID: I don't care if you reply or
9 don't reply. But I'm not wrong.

10 BY MR. HOLFORD:

11 Q. Can you remember any others that you had in
12 mind, Dr. Simmons?

13 MR. DAVID: Can you remember any of the
14 dosages that are in the quantities that are found in
15 cigarette smoke at all?

16 MR. HOLFORD: I didn't ask him about the
17 doses in cigarette smoke, Mr. David. I asked him
18 about the list he had in mind, which was for doses --

19 MR. DAVID: What he had in mind was for
20 dosages found in cigarette smoke. And that's what
21 I'm trying to tell you. And that's what I'm trying
22 to clear up this record for.

23 MR. HOLFORD: No. You have twisted our
24 conversation here for your advantage of being able to
25 talk on the record at nauseous end. I asked him

1 about constituents in tobacco smoke at doses at
2 levels he was talking about. Now --

3 MR. DAVID: At doses he was talking
4 about --

5 MR. HOLFORD: That's right.

6 MR. DAVID: At doses he was talking about
7 were at -- doses he was talking about were doses
8 other than what was found in tobacco smoke. Is that
9 what you're asking him? Is that what you're asking
10 him.

11 BY MR. HOLFORD:

12 Q. That's what you're talking about, isn't it, Dr.
13 Simmons?

14 A. I don't know what my answer conveyed at this
15 point. But what I was trying to say is that the
16 compounds, the 40 compounds you alluded to earlier --
17 if there are 40. I don't recall the number. I don't
18 recall the list. I have looked at it before. I
19 haven't looked at it recently. Those compounds are
20 found in tobacco smoke in extraordinarily small
21 concentrations. Very sophisticated analytical
22 technology is required to even detect these things
23 and quantify them in tobacco smoke.

24 Now, when these compounds are tested in
25 animal studies -- in other words, they're presented

1 to experimental animals in a gradient of doses --
2 those doses that the animals receive are
3 extraordinarily high when compared to the dose of
4 that compound that a smoker receives. Is that --

5 Q. But nonetheless, because of those animal tests,
6 and convergent epidemiological tests, and also in
7 vitro studies, they are shown to be human carcinogens
8 in the doses that you were talking about.

9 MR. DAVID: Well, I object.

10 BY MR. HOLFORD:

11 A. Classified as human carcinogens based upon --
12 within the domain of that experiment, within the
13 domain of the experimental evidence, the issue is
14 would they be human carcinogens at much lower doses.

15 Q. Do you know the answer to that?

16 A. In many cases compounds have been tested in
17 animals at doses at which they do not produce cancer.

18 Q. Yes, sir. But do you know whether those 40 or
19 so chemicals that are tested out to be carcinogenic
20 on animals would be carcinogenic in humans if they
21 were taken at the levels of cigarette smoke?

22 MR. ALLEN: Let me object. Let me object
23 to the question because it's over broad.

24 MR. GODLEWSKI: And asked and answered.

25 MR. ALLEN: And it's asked and answered.

1 MR. DAVID: And it also mischaracterizes
2 what's been shown.

3 BY MR. HOLFORD:

4 Q. Do you know that they are not, or is your answer
5 you don't, you don't know?

6 MR. DAVID: Same objection.

7 BY MR. HOLFORD:

8 A. I don't understand the question. I'm sorry,
9 Mr. Holford.

10 Q. Okay. Do beta-naphthylamines in cigarette smoke
11 cause cancer in humans?

12 A. I'm not sure I understand that question. Let me
13 tell you what I understand and see if you can
14 formulate the question around what I understand.

15 Q. Not the way it works, Dr. Simmons. I'd like an
16 answer to the question I asked.

17 MR. ALLEN: Well, I object.

18 MR. DAVID: He doesn't understand the
19 question. He said he didn't understand the question.

20 BY MR. HOLFORD:

21 A. I don't understand the question. I'm sorry.

22 MR. DAVID: You invited him to express to
23 you when he didn't understand the question. He said
24 he didn't. He's trying to help you by giving you
25 some basis around which to formulate an appropriate

1 understandable question.

2 MR. HOLFORD: That's right. Mr. David,
3 it's 5:13. And I'm flat going to tell you. If I
4 have to leave to catch my plane, which I must under
5 pressure of other business in this case, and I'm not
6 finished with Dr. Simmons I'm going to ask you to
7 bring him to Houston for me to finish my deposition.

8 MR. DAVID: And I'm going to tell you that
9 I'm not going to bring him to Houston, because you're
10 asking questions that are so far off base and
11 incapable of being understood.

12 BY MR. HOLFORD:

13 Q. Okay. Now, beta-naphthylamine is natural
14 constituent in cigarette smoke, right?

15 A. Beta-naphthylamine has been identified in
16 cigarette smoke in some, excuse me, in tobacco --
17 some tobacco smoke. Now, be sure you understand the
18 nature of this. When you see a list of constituents
19 that has been identified in tobacco smoke, all right,
20 whether it's in a Surgeon General's report or
21 wherever it appears, it means that somebody somewhere
22 has taken a tobacco product, produced some smoke and
23 made the measurement. It does not imply that that
24 constituent is found in every source of tobacco
25 smoke. It is a compilation of studies that have been

1 published over a period of years in which one group
2 might have looked for beta-naphthylamine or related
3 compounds, another group may have looked for phenolic
4 compounds. And so you don't know -- you don't have
5 the knowledge that it appears in every source of
6 tobacco smoke. I'm just trying to clarify that
7 there's generally a misunderstanding about the list,
8 that somebody has taken a whole lot of tobacco,
9 burned it, and found every one of those compounds can
10 be identified from the combustion of every kind of
11 tobacco.

12 Q. Let's just be sure. Since I can't -- I even
13 looked at the index, and I can't readily find it.
14 There is in the '89 Surgeon General's report a table
15 of approximately 40 constituents of tobacco smoke, so
16 represented in the Surgeon General's report, all
17 right. That -- and the purpose of that table is to
18 identify those 40 or so constituents as human
19 carcinogens. Do you agree with that?

20 A. I have seen the list, yes, sir.

21 Q. Okay. Now, beta-naphthylamines are on that
22 list, right?

23 A. Yes, sir, it is.

24 Q. Benzopyrene, I think, is on that list, right?

25 A. I recall that benzalaphapryne is on the list.

1 Q. And nitrosamines, different nitrosamines are on
2 that list; is that right?

3 A. Yes, sir, that's correct.

4 Q. And the Surgeon General report by showing that
5 table is representing that those 40 odd constituents
6 of tobacco smoke are human carcinogens.

7 MR. DAVID: Well, I'm going to object to
8 the form of the question.

9 BY MR. HOLFORD:

10 Q. In the levels which they're found in tobacco
11 smoke. Is that what the table shows? Not shows, not
12 proves, to you, Dr. Simmons. But isn't that what it
13 represents?

14 MR. DAVID: Well, you know what, Doug?
15 First of all, I'm going to object to the question.
16 You're not showing the person the table. Second of
17 all, you're asking him what the Surgeon General
18 intends to represent by a table that you don't even
19 show him. Come on.

20 BY MR. HOLFORD:

21 Q. Oh, well. Dr. Simmons, isn't that how you
22 understand that table? You don't agree with it,
23 right?

24 A. That's not how I understand the table.

25 Q. Oh, isn't it?

1 A. No.

2 Q. Okay. Well, then I've got to find it.

3 MR. DAVID: You definitely got to get a
4 different post-it system, Doug.

5 BY MR. HOLFORD:

6 Q. Dr. Simmons, having recalled the table, how do
7 you phrase what it represents?

8 MR. ALLEN: Wait. Let me object.

9 MR. DAVID: He didn't say he recalled the
10 table. I object.

11 MR. ALLEN: Let me object to the form of
12 the question because I think you're asking, if I'm
13 right, Mr. Holford, about a table in the '89 Surgeon
14 General's report. And if that's what you're asking
15 him about he's entitled to see the table. And
16 therefore, you've not shown it to him. So the
17 question's improper. The best evidence of what the
18 table shows would be the table. And now you're
19 asking him to guess and speculate. And question is
20 improper.

21 BY MR. HOLFORD:

22 Q. Let's see. Dr. Simmons, didn't you tell me you
23 recalled this table in this report?

24 A. I have seen a table of such as you refer to. I
25 don't know which Surgeon General's report it was in.

1 It may have been -- that's the 25th I believe you
2 have.

3 Q. Yes, sir, 1989. That is the thing -- it might
4 be in a different report.

5 A. You got to understand that there are a lot of
6 those reports.

7 Q. Yes, sir.

8 A. And different reports have different tables.
9 Now, I'm going on recollection. There was an earlier
10 report that had extensive reference to tobacco smoke
11 chemistry. I just don't recall at which one of those
12 things the table is in.

13 Q. Well, it was -- it wasn't the '88 report on
14 nicotine addiction, was it? Or maybe it was.

15 MR. ALLEN: I object. It calls for
16 conjecture and speculation. If you are going to talk
17 about a table, one you're talking about, the doctor
18 said he's not sure. I think we ought to get the
19 table out.

20 MR. HOLFORD: Your tobacco lawyers are
21 simply misstating the record. I'm not going to reply
22 to you.

23 MR. ALLEN: Let me tell you, Mr. Holford, I
24 rarely make objections. I'm not misstating the
25 record. You are talking about a table I haven't

1 seen, hadn't been produced to the witness. I think
2 we're entitled to have the table we're talking about
3 identified correctly.

4 BY MR. HOLFORD:

5 Q. Dr. Simmons, I'm going to continue questioning
6 while I look for that table.

7 MR. ALLEN: Which has not been produced.

8 BY MR. HOLFORD:

9 Q. I think we were on the 20/20 program when we
10 diverged. Did you also state on that program that
11 keeping a pet bird was as risky regarding lung cancer
12 as smoking was?

13 A. No, I did not.

14 Q. Oh. How do you compare the two?

15 A. I made no reference along those lines. The
16 subject of the program was exposure to environmental
17 tobacco smoke.

18 Q. Yes. Called *Smoke in Your Face*, right?

19 A. I don't recall the name of the program. But the
20 subject I gave the interview on was environmental
21 tobacco smoke and the EPA's classification.

22 Q. Oh. I had it wrong. I'm sorry. You're -- what
23 you said was -- you reminded me, Dr. Simmons. What
24 you said was that keeping a pet bird was as much risk
25 for getting lung cancer as was secondary smoke; is

1 that right?

2 MR. DAVID: I object to the form of the
3 question.

4 BY MR. HOLFORD:

5 A. No, sir, that's not.

6 Q. That's still not right?

7 A. No, sir, that's not correct.

8 Q. Did you say that keeping a pet bird was a, had a
9 relative risk of 6.7 for lung cancer?

10 MR. ALLEN: Let me -- Doctor, you can
11 answer the question. I just need to get my
12 objection. If Mr. Holford's asking the Doctor what
13 he said in a prior document or on a program which is
14 recorded the witness is entitled to see that document
15 before he makes a comment and not guess or speculate.
16 And you ought to present him that document.

17 BY MR. HOLFORD:

18 A. The subject was risk factors derived from
19 epidemiology for lung cancer. All I pointed out was
20 that a study had been published in which it was
21 reported that keeping a pet bird resulted in a
22 relative risk for lung cancer of 6.7. That study had
23 been published in a British medical journal. And I
24 pointed that out to Mr. Stossel, that this paper had
25 been published and that the EPA's estimate of the

1 relative risk for lung cancer and environmental
2 tobacco smoke was considerably less than 2. It was
3 in the 1.3 to 1.4 range. That was the relative risk
4 that they had concluded in their document. Now,
5 that's all that I pointed out. I was trying to
6 demonstrate that epidemiology can produce different,
7 lots of different relative risks.

8 Q. Do you use the term "risk factor" and -- well,
9 let me back up. When you show that an agent has been
10 shown to be a risk factor for a certain disease do
11 you mean that there is a measurable relative risk for
12 that agent and that disease?

13 A. It means that there is a statistical association
14 between the factor, whatever that factor happens to
15 be, and some event in the exposed population. The
16 risk factor is a statistical construct.

17 Q. And you don't believe that statistical studies,
18 including epidemiological studies, can ever show
19 causative relation, right?

20 A. That is correct, I don't.

21 Q. But I was really asking from the other
22 direction. I mean, you've shown me where you believe
23 that the idea of risk factor comes from. Now, what I
24 want to know is, when you use that term "risk factor"
25 do you agree that that means there is that you can

1 measure a relative risk for that agent relating to
2 that disease? Let's take an example. Let's go back
3 to the bird and lung cancer.

4 A. All right.

5 Q. You said that that paper you read stated a risk
6 factor of 6.7 for keeping a bird and getting lung
7 cancer, right?

8 A. That's correct.

9 Q. Is that the same thing to you as saying that
10 there is a relative risk of 6.7 for keeping a pet
11 bird as to getting lung cancer? That is, that a
12 person who keeps a pet bird has 6.7 times the chance
13 of getting lung cancer compared to a person who
14 doesn't ever keep a bird?

15 A. It means that that is the relative risk observed
16 in that, in the domain of that experiment.

17 Q. Okay. That single experiment in your CV of
18 Exhibit 2 on the third -- no. The fourth page
19 here -- regarding number, item number -- let me see
20 here, Dr. Simmons. 17, a paper by A. M. Fan,
21 F-A-N -- oh, that's not it. Okay. I'm sorry.
22 Number 14 by A. M. Fan, S. T. Rianne, R-I-A-N-N-E,
23 and others, it speaks of carcinogenic emissions from
24 coal fired electric generating and coal conversion
25 facilities, right?

1 A. Yes, sir.

2 Q. Okay.

3 A. Can I read the title of that?

4 Q. Yes, sir. Were you speaking of human
5 carcinogens there?

6 A. It's been a long time since I've seen that. The
7 date on that 1980?

8 Q. '80, yes, sir.

9 A. I haven't looked at that document. I don't even
10 know that I have a copy of that document. To the
11 best of my recollection we were serving compounds
12 that had been classified by one group or another as
13 carcinogens.

14 Q. But I mean it was, it was human carcinogens, not
15 bovine carcinogens or --

16 A. Could have been just tested in animals.

17 Q. Well, what I'm getting at is you're talking
18 about emission from a coal fired and electric
19 generating and coal conversion facility because it's
20 located around homes and people, right, not out in
21 the country around cows.

22 A. As a matter of fact, the power plants that I
23 dealt with quite often were way off in the -- they
24 were not close by. Of course, the issue is that the
25 emissions can disseminate throughout the environment

1 and through the atmosphere. So we were just
2 surveying the compounds that had been identified as
3 appearing in combustion of coal by one source or
4 another.

5 Q. I know. But because this was a disseminated --
6 the emissions from this generating plant were
7 disseminated into areas where humans live, that was
8 so, wasn't it?

9 A. That's true. It -- ultimately they will, yes.

10 Q. And isn't that why there was a concern enough to
11 do this study and write this paper, because there
12 were people being exposed to these emissions?

13 A. The thrust of the work is quite different. I
14 believe that was done for -- can I see it one more
15 time?

16 Q. Yes.

17 A. Yeah. Done for the Electric Power Research
18 Institute. And they do research into these areas,
19 abatement research and different things like that.
20 They want to know what they're dealing with, what
21 magnitude. So we perform this exercise, literature
22 survey exercise for them. I'm not sure what their
23 ultimate use of that product is.

24 Q. With just what we have before here don't you
25 think it probably was concern over human beings?

1 MR. ALLEN: Let me object to the question.
2 And the record needs to reflect, because it does not,
3 Mr. Holford just said with what we have before here,
4 and what he has is the CV of Dr. Simmons, and a title
5 entitled whatever number 14 is entitled. The witness
6 has just testified that he does not know for what
7 purpose the coal company used it, and he does not
8 have the paper in front of him. And now Mr. Holford
9 has asked him the question: What do you think the
10 coal company probably did with it? I think the
11 question is improper because it calls for conjecture
12 and speculation based upon the witness' prior answer.
13 Also it asks him about the contents of a document not
14 before us. And therefore, it calls for conjecture
15 and speculation. And what the document says is the
16 best evidence, and not been produced. And therefore,
17 the question is improper.

18 BY MR. HOLFORD:

19 Q. This is a -- I need to ask you first, you don't
20 appear on the author of this paper, do you?

21 A. Oh. I am one of the authors on all of these
22 papers. I believe that's the way this was set up.

23 Q. Okay. You simply list the other authors?

24 A. Exactly.

25 Q. All right. I remember now that I figured that

1 out.

2 A. Yeah, right. That's exactly right.

3 Q. Okay. So you wrote, you and others wrote this
4 paper, right?

5 A. That's correct, yes, sir.

6 Q. And your only difficulty in remembering is that
7 this was 14 years ago, right?

8 A. And I'm 58 years old, and things slide.

9 Q. All right. But so I'm really asking for your
10 reasoning here now. Would this kind of work been
11 done if there hadn't been a concern for human health?

12 A. I'm not sure what they were doing. It could
13 have been occupational human health. It could have
14 been population human health. It could have been --
15 I mean I'm speculating. I'm not sure what the
16 driving force was behind the document. Technology
17 development is something that they spend a lot of
18 money in developing.

19 Q. But you're dealing with the carcinogenicity of
20 the emissions, right? Isn't that what this dealt
21 with?

22 MR. DAVID: Look. I just want to -- we're
23 not here to speculate. We're not here to guess. If
24 you don't have a recollection, you don't have a
25 recollection. It's a perfectly legitimate response.

1 BY MR. HOLFORD:

2 A. The survey was of chemicals that had been
3 classified by someone or another.

4 Q. As carcinogens?

5 A. As carcinogens.

6 Q. Equipment doesn't get cancer. Trees don't get
7 cancer, right?

8 MR. DAVID: Come on, Doug. Come on Doug.

9 BY MR. HOLFORD:

10 Q. I think you said, and let's see if we can agree,
11 that this paper probably, because you don't
12 specifically recall, probably arose out of a concern
13 for either the workers in this generating plant or
14 peoples who were in the flow path of the emissions
15 from the plant; isn't that right?

16 A. That's certainly a possibility, yes, sir.

17 Q. So but in that case these are human carcinogens.

18 A. Not necessarily.

19 Q. Okay. Was the carcinogen -- was a carcinogen
20 found in the emissions or reported to be so in this
21 paper, number 14, coal tar?

22 MR. ALLEN: Let me just state my same
23 objection I just made, so I do not interrupt the
24 flow. But the same objection applies.

25 BY MR. HOLFORD:

1 A. I don't recall what was in there.

2 Q. Okay. Is this paper publicly available?

3 A. I don't have a copy of it. I don't know,
4 Mr. Holford. I don't know whether it is or not.

5 Q. All you could do would be contact the Electric
6 Power Research Institute and see if they would give
7 you one, I guess.

8 MR. DAVID: You mean that's all you could
9 do too.

10 BY MR. HOLFORD:

11 A. I don't know how I would obtain a copy of it.

12 Q. Now -- oh, I guess we better get to this.

13 Number -- where are we at, 4? Yes.

14 I show you what's been marked Exhibit 4,
15 Dr. Simmons. Are you familiar with that, or the
16 content of it?

17 A. Yes, sir, I am.

18 Q. Okay. Does Exhibit 4 state all of the opinions?

19 A. Wait. Excuse me.

20 Q. Oh, sorry.

21 A. Excuse me.

22 Q. There may be somebody else on there too?

23 A. That surprised me. There is somebody else on
24 here. I better --

25 Q. I think they took yours and put it together with

1 others before they gave it to me. You see?

2 A. All right.

3 Q. Okay. So -- and I'll amend my question. Does
4 Exhibit 4, the part of it that is under your name
5 here, state all of the opinions that you presently
6 know of that -- and that you expect to state at the
7 trial of this case?

8 A. I didn't understand that question.

9 Q. Oh, well then. Just tell me. Okay. In other
10 words, does that state your opinions that you, as you
11 gave it to your counsel?

12 MR. DAVID: Wo, wo, wo -- you going to ask
13 him for some sort of attorney/client communication
14 here, or what?

15 MR. HOLFORD: All right. I'll change it.

16 BY MR. HOLFORD:

17 Q. Does Exhibit 4, the part under your name,
18 correctly state the opinions you have in this case?

19 A. Yes, sir, it does.

20 Q. Do you know the relative risks presented for
21 laryngeal cancer by cigarette smoking?

22 A. The relative risks varies with the epidemiology
23 study. There have been a number of epidemiology
24 studies in which the relative risks -- I don't even
25 know the total range. I don't recall it. I've seen

1 a lot of these numbers. The majority of them are
2 quite low. They're in the 2 to 4 range. I recall
3 that. But I would have to go back and review those.

4 Q. Are you familiar with the statement of relative
5 risks in these *Morbidity and Mortality Weekly Reports*
6 for the Centers for Disease Control?

7 A. I have seen those. I don't recall exactly. I
8 get those on a regular basis.

9 Q. I have one here of August 27, 1993, volume 42,
10 number 33. Do you see that there in the corner?

11 A. Right.

12 Q. And I'm looking on page 646 here, Table 1. And
13 that states a relative risk for current smokers,
14 male, of 10.5. Is that what it states?

15 A. I can't see it from here.

16 Q. I'm sorry. It's rather small.

17 MR. DAVID: Where are we?

18 BY MR. HOLFORD:

19 A. Right here. It also gives a reference. I mean,
20 I could -- it looks like it would be reference -- no,
21 that's classification.

22 MR. DAVID: For 10.5 looks to me like
23 trachea, lung, bronchus? Are you talking about
24 larynx?

25 BY MR. HOLFORD:

1 A. It's larynx.

2 MR. DAVID: I'm sorry. Maybe I'm wrong.

3 BY MR. HOLFORD:

4 Q. Okay. So at page 646 this report, the -- it
5 states the relative risk for male current smokers for
6 cancer of the larynx as 10.5; is that correct?

7 A. That's correct.

8 Q. Okay. Now, and this is, this is the later one.
9 I have another one here for February 1, 1991, volume
10 40, number 4.

11 MR. ALLEN: February 21st, you said?

12 BY MR. HOLFORD:

13 A. February 1, 1991.

14 Q. That's not the page, I think. Oh, is it? Yeah,
15 okay. And what does that show for male current
16 smokers what the relative risk for larynx cancer is?

17 A. Looks like exactly the same thing.

18 Q. 10.5, right?

19 A. 10.5.

20 Q. So what that means is whatever studies they've
21 looked at between February of '91 and August of '93
22 the CDC doesn't believe that the relative risk has
23 shown to be changed any, it's 10.5, right?

24 MR. ALLEN: I object to the extent it
25 assumes they look at any other test.

1 BY MR. HOLFORD:

2 Q. If they did see any.

3 A. I don't know the procedure by which they
4 formulate these lists of relative risks. I do know
5 that there are many epidemiology studies available,
6 both in the United States and in Europe and some in
7 Asia, and there's a highly variable relative risk
8 range. In other words, as I pointed out before, some
9 of them are quite low. Some of them go as high as
10 10, that's correct.

11 Q. Okay.

12 A. As a matter of fact, I've only seen one as high
13 as 10. But that's the only one that I recall that
14 happened.

15 Q. Okay. Dr. Simmons, are you prepared to testify
16 that these findings of relative risks of 10.5 for
17 current smoke -- current male smokers for larynx
18 cancer are not valid?

19 A. I'm not sure what you mean by valid. I don't
20 understand how you're using the term "valid".

21 Q. Reliable, trustworthy, those terms.

22 A. I am prepared to testify that in this
23 particular, some particular epidemiology study,
24 whichever one, as it was executed by its own
25 experimental design they found a relative risk of

1 10.5, or they reported a relative risk of 10.5. And
2 apparently it shows up, the CDC has incorporated it,
3 that particular number, into their report. Now,
4 there are other studies which show a lower relative
5 risk than that. So I don't know what you mean by
6 valid. I'm not going -- I mean, that's true within
7 the domain of the experimental design and execution
8 of that study. That's what the relative risk was in
9 that particular study.

10 Q. Okay. Now, Dr. Simmons, are you saying that you
11 know that the CDC in determining the relative risks
12 reported in these MMWR's look at only one study?

13 MR. ALLEN: Objection.

14 BY MR. HOLFORD:

15 A. What I said was that I don't know how they
16 prepare those things.

17 Q. Do you believe that they look at only one study?

18 MR. DAVID: Oh, come on.

19 MR. ALLEN: Let me object.

20 MR. HOLFORD: I want to know his answer.

21 MR. DAVID: He said he doesn't know how
22 they do it.

23 MR. ALLEN: I'll just make a legal
24 objection. The witness has testified he didn't know.
25 He was asked if you believe. I object to the

1 question because it calls for conjecture and
2 speculation.

3 MR. DAVID: Whatever one did you use.

4 BY MR. HOLFORD:

5 Q. I guess, Dr. Simmons, I need to ask you this.
6 Do you have any basis on which to testify that these
7 MMWR's are untrustworthy in reporting a relative risk
8 of 10.5 for male current smokers for larynx cancer?

9 A. I don't know how they prepared those things, so
10 I can't really address the question. I don't know
11 how they were prepared, what the driving force or
12 philosophy was. I don't know.

13 MR. DAVID: You can't address it one way or
14 the other.

15 BY MR. HOLFORD:

16 Q. Is this true, Dr. Simmons, that for you as
17 Director for Smoking and Health for the R. J.
18 Reynolds Tobacco Company to agree that cigarette
19 smoking causes larynx cancer you'd have to have this
20 etiology of larynx cancer proven? Is that a true
21 statement?

22 MR. DAVID: May I have the question read
23 back, please? Because I'm not sure -- I didn't hear
24 part of it.

25 (WHEREUPON: The pending question was read

1 back.)

2 MR. DAVID: Object to the form of the
3 question. It's vague.

4 BY MR. HOLFORD:

5 A. I'm not sure how you're using etiology here. I
6 think earlier in one of my answers I sort of outlined
7 a framework within which I would evaluate on a case
8 by case basis whether something would be classified
9 as a human carcinogen or not. Now, the first thing
10 that I said was I would prefer, ideally, to have a
11 mechanism, that is at the molecular level, a
12 xenobiotic chemical interacts with some biological
13 molecule and initiates a process that results
14 neoplasia. Okay. We don't have that. Nobody knows
15 what causes cancer. Now, in the absence of that, we
16 have resorted to a phenomenological definition. That
17 is epidemiology. We look at animal toxicology, and
18 to a certain extent in vitro tests. Now, what we --
19 according to -- you have to evaluate one of them on a
20 case by case basis to see how valid is the
21 epidemiology, how rigorous is the animal study, and
22 so forth. This is the type of data that you use.
23 And there is no set formula so that you take every
24 candidate as a stand alone case to evaluate whether
25 or not you can classify it as a human carcinogen.

1 Q. When you say candidate you're talking about the
2 constituent in question?

3 A. The constituent in question.

4 Q. Okay. And I believe you said that when the --
5 these technologies, the epidemiology, the animal
6 studies, the in vitro studies, converge to show the
7 same conclusion that you then can make a conclusion
8 on whether that constituent is a carcinogen.

9 A. Can be classified as a human carcinogen. But
10 you want convergence. And this would be of a
11 rigorous reproducible quality.

12 Q. Okay. So the answer to the question I asked you
13 is no. In other words, you, Dr. William S. Simmons,
14 as Director of Smoking and Health -- I mean, it's
15 possible that you can conclude that a constituent is
16 a human carcinogen without having the mechanism of
17 molecular progression shown.

18 MR. DAVID: Objection. Calls for
19 speculation on the part of this witness as to what is
20 possible, and what is possible by any human being on
21 the face of the earth.

22 BY MR. HOLFORD:

23 Q. Is that right?

24 A. My -- what I was trying to convey, Mr. Holford,
25 is that we can classify something as a human

1 carcinogen within certain experimental domains,
2 right. And that would be the epe, the animal
3 studies, the in vitro studies, within a dose range,
4 within this range.

5 Q. All right. And you can classify that
6 constituent as a human carcinogen within that dose
7 range without knowing the actual mechanism by which
8 that constituent would cause that cancer.

9 MR. DAVID: Same objection as to the prior
10 question. Are you talking about you, Mr. Simmons or
11 you --

12 MR. HOLFORD: Yes, you, Mr. Simmons,
13 Director of Smoking and Health function for R. J.
14 Reynolds.

15 BY MR. HOLFORD:

16 Q. Isn't that true, if you have that convergence?

17 A. If I have a solid epidemiology with the rigorous
18 reproducible animal study and so forth then I might
19 be able to classify something as a human carcinogen,
20 yes.

21 MR. DAVID: Doug, I need two minutes.

22 MR. HOLFORD: Okay.

23 (WHEREUPON: There was a brief pause at
24 5:50 p.m.)

25 BY MR. HOLFORD:

1 Q. Dr. Simmons, he's got the notice. We're looking
2 for your report. Not your report. Opinions.

3 MR. ALLEN: I think the last person that
4 had that was you.

5 MR. HOLFORD: No. I have my copy of it.

6 MR. DAVID: Well, that's all you ever had.

7 MR. HOLFORD: Uh-oh. Uh-oh.

8 MR. ALLEN: Let the record reflect
9 Mr. Holford did in fact have it.

10 BY MR. HOLFORD:

11 Q. Dr. Simmons, before the break, by that process
12 that you just described for a dosage level that you
13 contend is higher than that found in cigarette
14 smoking you have -- you do agree that
15 beta-naphthylamine is a human carcinogen.

16 A. Has been classified as a human carcinogen.

17 Q. Okay. Do you agree, Dr. Simmons, that the
18 tobacco industry -- and I mean that term worldwide --
19 is the only institution in the world that is or
20 should be interested in human health if that isn't
21 convinced that smoking causes cancer and coronary
22 heart disease and emphysema?

23 MR. ALLEN: Wait. Let me get my --

24 MR. HOLFORD: In humans.

25 MR. ALLEN: Let me get my objection on the

1 record. I need to object to the question. Number
2 one, based on the last part, that it's compound.
3 Number two, that it's argumentative. And number
4 three, that it leaves undefined terms, such as
5 tobacco industry. And by that I mean worldwide, one
6 of Mr. Holford's questions. Therefore, it's
7 undefined, ambiguous and argumentative.

8 BY MR. HOLFORD:

9 Q. Isn't that true, Dr. Simmons, as within your
10 knowledge as Director, as carrying a function of
11 Director of Smoking and Health?

12 A. I don't know, one, about the tobacco industry
13 worldwide. I can only speak really for my company.
14 I have not surveyed all of the institutions in the
15 world. I don't know what the opinions would be if
16 one surveyed all of the institutions in the world. I
17 don't know what I would find. And so I don't know
18 how to correctly address your question.

19 Q. Let me ask it this way, Dr. Simmons. If you can
20 name one other institution anywhere, other than the
21 R. J. Reynolds Tobacco Company, that is not convinced
22 that cigarette smoking causes disease in humans.

23 MR. ALLEN: I object to the question to
24 extent it's argumentative, number one. And number
25 two, calls for conjecture and speculation. And

1 number three, is irrelevant.

2 BY MR. HOLFORD:

3 A. I have not made a survey of institutions. I
4 don't know how to answer the question. I mean, it's
5 not something that I would look into. I formulate my
6 own opinions based on the evidence that's in front of
7 me. And I'm not concerned about what other
8 institutions -- I mean, I read their opinions. I
9 look at their opinions. But I have to formulate my
10 own opinion.

11 Q. Have you seen any opinion from any institution
12 other than the R. J. Reynolds Tobacco Company that
13 isn't convinced that cigarette smoking causes disease
14 in humans?

15 MR. DAVID: Well, I'm going to object to
16 the form of the question.

17 BY MR. HOLFORD:

18 A. There have been over the past 40 years a number
19 of individuals who have published contrary opinions.

20 Q. My question is as to today, Doctor.

21 MR. ALLEN: Let him finish his answer. I
22 object to the extent the witness was not allowed to
23 finish his answer. If he was finished then he's
24 finished.

25 BY MR. HOLFORD:

1 A. More recently there have been publications.
2 There was a publication in the early 90's. And I
3 don't recall the date. There is a book that was
4 written called *Smoking and Common Sense* in which --
5 by a Dr. Voss, who's a European physician, that
6 disagreed or took the other side of the argument that
7 it had not been proven that cigarette smoking was a
8 cause of certain human diseases.

9 Q. Okay. I really didn't mean to address, Dr.
10 Simmons, the views of one doctor writing a book.
11 What my question is, is there any institution like
12 the World Health Organization, or institutions that
13 are interested in smoking and human health, that you
14 know of, that you've seen the opinions of lately that
15 you can say is not convinced that smoking causes
16 disease in humans?

17 MR. ALLEN: Same objection. And asked and
18 answered.

19 BY MR. HOLFORD:

20 A. I'm sorry.

21 MR. ALLEN: I'm sorry. I just made the
22 same objection. And I object. It's been asked and
23 answered.

24 BY MR. HOLFORD:

25 A. I can't recall any.

1 Q. Do you know if the R. J. Reynolds Tobacco
2 Company in any department or operation extracts pure
3 nicotine from a tobacco leaf?

4 A. We do not do that in any department.

5 Q. You know, you know of company-wide? Its' your
6 testimony that that is not done; is that right?

7 A. That is not done. You said pure nicotine.

8 Q. Right.

9 A. Right.

10 Q. Does the R. J. Reynolds Tobacco Company extract
11 a substance that is primarily nicotine from tobacco
12 leaf?

13 A. We have a process by which we reduce the
14 nicotine concentration in tobacco leaf, certain
15 tobacco leaf, if it's too high, certainly. I don't
16 know that that's the primary constituent that's taken
17 out. A lot of things come out with it, with that
18 nicotine.

19 Q. All right. What is the purpose of the company
20 so reducing the nicotine?

21 A. The nicotine is, is bitter. It imparts a bitter
22 attribute to the smoke. This can be undesirable to
23 the smoker. And so in taking the nicotine down it
24 enables us to control tar also.

25 Q. Okay. So it's not a toxicity concern?

1 A. It is a concern for the organoleptic character
2 of the smoke.

3 Q. I'm sorry. I don't know -- what does
4 organoleptic mean?

5 A. That would include the entire spectrum of
6 sensations that one receives from smoking.

7 Q. Is there such a thing experienced by smokers as
8 nicotine shock if the concentration of nicotine is
9 too high?

10 A. If the dose of nicotine is too high one can
11 experience a sensation. I've never heard it referred
12 to as nicotine shock. But that there is a sensation
13 from getting a high dose of nicotine, yes.

14 Q. The company blends reconstituted tobacco and
15 natural tobacco leaf, or whole leaf that is, in
16 making it cigarettes today, doesn't it?

17 A. Among other things. I mean, also expanded
18 tobacco and reconstituted sheet and whole leaf.

19 Q. Does the -- back up. Reconstituted tobacco
20 contains very little nicotine, doesn't it?

21 A. I don't know what you mean by very little.

22 Q. Significantly less than the, than the leaf.

23 A. Somewhat less than the leaf.

24 Q. Okay. Well, when you use part reconstituted
25 tobacco instead of just leaf, and in fact when you

1 use expanded tobacco instead of just leaf do you have
2 to -- when you're finished putting all those together
3 do you have to readjust the nicotine level in the
4 cigarettes?

5 A. No, sir.

6 Q. You just let it be whatever it comes out?

7 A. The blending -- and Mr. Holford, you're not
8 talking to an expert. I am not an expert in
9 blending. I'm not an expert in cigarette design or
10 manufacture.

11 MR. DAVID: In that case I'm -- in that
12 case I think, Doug, that we're beyond the scope of
13 what this witness is offered for, beyond the scope of
14 what this witness is capable of testifying to. I'm
15 going to object to the question. It's outside of the
16 context of his expertise.

17 BY MR. HOLFORD:

18 Q. You are a chemist; is that right?

19 A. I am.

20 MR. DAVID: He said it's outside of the
21 context of his expertise. Don't argue with him.

22 BY MR. HOLFORD:

23 Q. Do I have to read your CV, Dr. Simmons. You are
24 a chemist, right?

25 MR. DAVID: Don't argue with him. It's

1 outside the area of his expertise. He said it.

2 BY MR. HOLFORD:

3 A. I am a chemist.

4 MR. DAVID: So are you, Doug, aren't you?

5 BY MR. HOLFORD:

6 Q. I didn't know -- I didn't get your answer, I
7 don't think. Do you, after you've reconstituted the
8 cigarette with the leaf and the reconstituted tobacco
9 and the expanded tobacco do you just let the nicotine
10 level be whatever it comes out in those cigarettes?

11 MR. ALLEN: Asked and answered.

12 MR. DAVID: Asked and answered and outside
13 the area of this witness' expertise. Outside the
14 area he's designated to testify about. And he has so
15 indicated.

16 BY MR. HOLFORD:

17 Q. You got as far as mentioning some blending
18 process.

19 MR. DAVID: Sam, if you don't know you
20 don't know. Don't guess at what people are doing or
21 not doing if you don't know. It's not your function
22 here.

23 BY MR. HOLFORD:

24 A. The blend determines the nicotine level.

25 Q. All right. So does the company make the blend

1 so that the nicotine level in its cigarettes come out
2 to a predetermined level?

3 MR. DAVID: Same objection as the prior
4 question.

5 BY MR. HOLFORD:

6 A. I'm not sure how that's done.

7 Q. Not how it's done. Is that the objective of it?

8 MR. DAVID: Same objection.

9 BY MR. HOLFORD:

10 A. I'm not certain enough to provide an expert
11 answer to that.

12 Q. Do the cigarettes that R. J. Reynolds Company
13 makes and sells have a predetermined nicotine level
14 in them adjusted to what the company believes is the
15 tastes of the smoker?

16 MR. DAVID: Object to the question.
17 Calling for speculation on the part of this witness.
18 He's indicated he's not an expert in that area and
19 doesn't know.

20 BY MR. HOLFORD:

21 A. I'm not sure.

22 MR. DAVID: Before you get started I want
23 to make the further objection that you've just
24 finished a deposition on a person who was admittedly
25 a design expert in cigarettes and you didn't even ask

1 him these questions when you had an opportunity to do
2 so.

3 MR. HOLFORD: I think I did.

4 MR. DAVID: No, you didn't.

5 MR. HOLFORD: You want me to tell Dr.
6 Simmons what he said or you want to just leave it
7 like it is?

8 BY MR. HOLFORD:

9 Q. Dr. Simmons, you see this, this -- oh, I'm
10 sorry -- this second page of Townsend Exhibit No. 4,
11 this pie chart here?

12 A. All right, sir.

13 Q. Okay. You see that .3 percent nicotine down
14 there?

15 A. I see that, yeah.

16 Q. Okay. Is that the level that R. J. Reynolds
17 desires to get in the cigarette smoke of the
18 cigarettes themselves?

19 MR. DAVID: Let the record reflect that the
20 exhibit shows *Composition of Winston 85 Main Stream*
21 *Smoke?*

22 BY MR. HOLFORD:

23 A. The way -- okay. One thing, I'm not familiar
24 with the way this composition is expressed in
25 percentages. I'm not familiar with that.

1 Q. Okay. Um-hum.

2 A. I know that a Winston cigarette under FTC,
3 Federal Trade Commission, smoking conditions will
4 yield approximately 1.2 milligrams of nicotine. Now,
5 the primary way of achieving that is through
6 filtration, air dilution and blending, all right.
7 Now, does that answer your question?

8 Q. So what you're saying is then that, that each
9 brand of cigarettes that R. J. Reynolds Company sells
10 has its own level of nicotine; is that right?

11 A. As far as I'm -- as far as if I know every brand
12 that's on the market has a certain nicotine, tar,
13 carbon monoxide yield, that is specific to that
14 brand.

15 Q. All right. That's fine.

16 MR. HOLFORD: That's all I have.

17 MR. DAVID: Like to review and sign. Thank
18 you. I would like to mark that as an exhibit and
19 make it apart of the --

20 (WHEREUPON: The deposition was concluded
21 at 6:30 p.m.)

22 (SIGNATURE RESERVED)

23

24

25


1 STATE OF NORTH CAROLINA
2 COUNTY OF GUILFORD

3 CERTIFICATE

4 I, Pamela T. Rayburn, a Notary Public in
5 and for the State of North Carolina, do hereby certify
6 that there came before me on March 31, 1994, the
7 person hereinbefore named, who was by me duly sworn
8 to testify to the truth and nothing but the truth of
9 knowledge concerning the matters in controversy in
10 this cause; that the witness was thereupon examined
11 under oath, the examination reduced to typewriting
12 under my direction, and the deposition is a true
13 record of the testimony given by the witness.

14 I further certify that I am neither
15 attorney or counsel for, nor related to or employed
16 by any attorney or counsel employed by the parties
17 hereto or financially interested in the action.

18 IN WITNESS WHEREOF, I have hereto set my
19 hand and affixed my official notarial seal, this the
20 7th day of April, 1994.

21
22 
23 PAMELA T. RAYBURN, Notary Public
24 My Commission Expires: 8/4/97
25

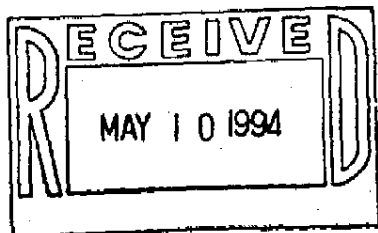
C E R T I F I C A T E

I, DR. WILLIAM SAMUEL SIMMONS, do hereby
certify that I have read the foregoing transcript of
my testimony, and further certify that said transcript
is a true and accurate record of said testimony.

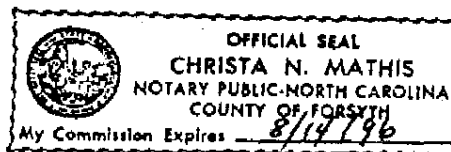
R. J. Reynolds Tobacco Co.
Dated at Winston-Salem, this 27th day of April,
North Carolina
1994.

William S. Simmons

Sworn and subscribed to before me this 27th day
of April, 1994.



Christa N. Mathis
Notary Public
My Commission Expires:



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RE: Allgood, etal vs. RJR & American Tobacco, etal

DEPOSITION OF: Dr. William Samuel Simmons

To assist you in making any such corrections, please use the form below. If supplemental or additional pages are necessary, please furnish same and attach them to this Errata Sheet.

~~read:~~ fact present in animals exposed to bis(chloromethyl)ether

read: I recall that benzo[α]pyrene is on the list.

read: been published in the British Medical Journal. And I

read: best of my recollection we were reviewing compounds

read: right. And that would be the epi, the animal

read:

read: